

Amendments to the Specification:

Please replace paragraph [0003] with the following rewritten paragraph:

a¹ --[0003] As described in WO 99/21036, the waveguide 1 is a rib waveguide. An oxide coating 6A is formed over the rib waveguide 1 and an oxide layer 6 is formed under the rib waveguide 1. Temperature control means 9, such as metal coatings, are applied over the rib waveguide 1. By passing an electrical current through therethrough, the temperature control means 9 are heated to heat the rib waveguide 1 and adjust the refractive index of the silicon of the rib waveguide 1. Because the rib waveguide 1 is substantially thermally isolated from the silicon substrate 5, the power and time required to heat the rib waveguide 1 are reduced.--

Please replace paragraph [0027] with the following rewritten paragraph:

a² --[0027] Furthermore, the systems and methods of this invention contemplate any known or hereafter developed device incorporating such a silicon structure. For example, a silicon-based thermo-optical switch as described below may be fabricated as part of a reconfigurable optical multiplexer as described in copending Application No. (~~Attorney Docket No. 108757~~)09/906,395, filed November 8, 2001, which is incorporated herein by reference in its entirety.--

Please replace paragraph [0031] with the following rewritten paragraph:

a³ --[0031] As shown in Fig. 2, the arms 132 are defined by a gap 134 formed by a removal of a portion of an insulator layer 130. The insulator layer 130 is formed over a substrate ~~110~~(not shown) and separates the silicon thermo-optical switch 122 from the substrate ~~110~~. As shown, the gap 134 extends under the silicon thermo-optical switch 122. Thus, the silicon thermo-optical switch 122 is substantially thermally isolated from the substrate ~~110~~.--

Please replace paragraph [0046] with the following rewritten paragraph:

a⁴ --[0046] A suitable technique for fabricating the silicon structure as an optical switch is described in copending U.S. Patent Applications Serial Nos. (~~Attorney Docket Nos. D/98777, D/98777Q and D/98777Q1~~),09/467,526 and U.S. Patent Nos. 6,362,512 and 6,379,989 which are incorporated herein by reference in their entirety. Another suitable technique is described in copending U.S. Patent Application Serial No. (~~Attorney Docket No. D/A0164~~)09/718,107, which is incorporated herein by reference in its entirety.--